

# **Uncovering the Gaming Industry's Hidden Gems: A Comprehensive Analysis of Video Game Sales**

## **Milestone 1: Define Problem / Problem Understanding**

### **Activity 1: Specify the business problem**

Video game sales analysis is the process of collecting and analyzing data about the sales of video games in order to understand market trends and consumer behavior. This type of analysis can be useful for a variety of purposes, including identifying the most popular games and genres, predicting future sales, and developing marketing strategies. Video game sales analysis typically involves collecting data from Kaggle sources. It was generated by a scrape of vgchartz.com. This data may include information about the number of units sold, the retail price, and the platforms on which the games are played. Once the data has been collected, it is typically analyzed using tableau. The results of the analysis can be used to identify trends and patterns in the market, and to make informed decisions about the development and marketing of video games. Video game sales analysis may be conducted by game developers, publishers, retailers, and other industry professionals. It is an important part of the video game industry, as it helps to understand the needs and preferences of consumers and to identify opportunities for growth and innovation.

Analysing sales data from more than 16,500 games. This dataset contains a list of video games with sales greater than 100,000 copies. It was generated by a scrape of vgchartz.com.

## **Activity 2: Business requirements**

Business requirements for analyzing video game sales would include data on the sales of specific video games, information on the gaming industry as a whole, and data on consumer demographics and purchasing habits. This information can be used to identify trends and make informed decisions on marketing and development strategies for future video game releases. Additionally, it's also important to have information on platform sales, region, and competition in the market.

## **Activity 3: Literature Survey (Student Will Write)**

Video Game Industry Analysis: Insights and Forecast- by Research and Markets (2016) This report provides a comprehensive analysis of the global video game industry, "Video Game Industry: Current Trends and Future Opportunities" by PwC (2019) - This report analyzes the current state of the global video game industry, including market size and growth, revenue streams, and consumer demographics. It also explores future opportunities for the industry, such as the potential for virtual reality and mobile gaming.

"Global Video Game Market: Size, Trends & Forecasts (2018-2022)" by Daedal Research (2018) - This report provides a detailed analysis of the global video game market, including market size and growth, segmentation by platform, and regional trends. It also includes market forecasts for the next five years.

"Video Game Sales by Platform: A Comparative Analysis" by Newzoo (2017) - This report compares the sales of video games across different platforms, including consoles, PC, and mobile. It also includes data on the top-selling games for each platform and analyses trends in the industry.

## **Activity 4: Social or Business Impact.**

### Social Impact:

Increased social interaction and connection through online multiplayer gaming. Increased awareness and representation of diverse groups in the gaming industry. Increased accessibility to gaming through mobile and online platforms. Increased use of gaming as a form of therapy or rehabilitation

### Business Impact:

Increased revenue for the gaming industry. Increased competition among game developers and publishers. Increased investment in research and development for new technologies and platforms. Increased use of data analytics to track player behaviour and improve game design. Increased use of microtransactions and in-game purchases for additional revenue streams.

## **Milestone 2: Data Collection & Extraction from Database**

Data collection is the process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer stated research questions, test hypotheses, and evaluate outcomes and generate insights from the data.

### **Activity 1: Collect the dataset**

# vgsales.csv Rank	Abc vgsales.csv Name	Abc vgsales.csv Platform	# vgsales.csv Year	Abc vgsales.csv Genre	Abc vgsales.csv Publisher	# vgsales.csv NA Sales	# vgsales.csv EU Sales	# vgsales.csv JP Sales	# vgsales.csv Other Sales
1	Wii Sports	Wii	2006	Sports	Nintendo	41.4900	29.0200	3.7700	8.4
2	Super Mario Bros.	NES	1985	Platform	Nintendo	29.0800	3.5800	6.8100	0.7
3	Mario Kart Wii	Wii	2008	Racing	Nintendo	15.8500	12.8800	3.7900	3.3
4	Wii Sports Resort	Wii	2009	Sports	Nintendo	15.7500	11.0100	3.2800	2.9
5	Pokemon Red/Pokemon Blue	GB	1996	Role-Playing	Nintendo	11.2700	8.8900	10.2200	1.0
6	Tetris	GB	1989	Puzzle	Nintendo	23.2000	2.2600	4.2200	0.5
7	New Super Mario Bros.	DS	2006	Platform	Nintendo	11.3800	9.2300	6.5000	2.9
8	Wii Play	Wii	2006	Misc	Nintendo	14.0300	9.2000	2.9300	2.8
9	New Super Mario Bros. Wii	Wii	2009	Platform	Nintendo	14.5900	7.0600	4.7000	2.2
10	Duck Hunt	NES	1984	Shooter	Nintendo	26.9300	0.6300	0.2800	0.4
11	Nintendogs	DS	2005	Simulation	Nintendo	9.0700	11.0000	1.9300	2.7
12	Mario Kart DS	DS	2005	Racing	Nintendo	9.8100	7.5700	4.1300	1.9
13	Pokemon Gold/Pokemon Si...	GB	1999	Role-Playing	Nintendo	9.0000	6.1800	7.2000	0.3

## Activity 1.1: Understand the data

The data source of this project contains a list of video games with sales greater than 100,000 copies. It was generated by a scrape of vgchartz.com.

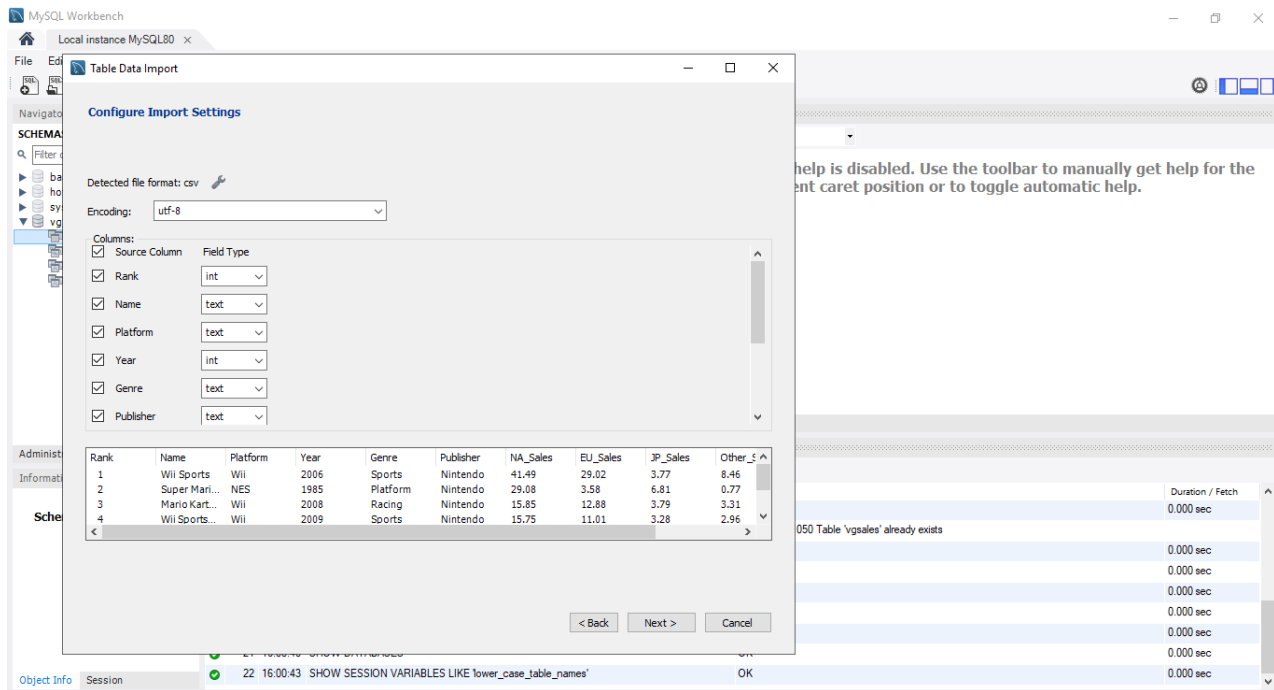
Fields include

1. Rank - Ranking of overall sales
2. Name - The games name
3. Platform - Platform of the games release (i.e. PC, PS4, etc.)
4. Year - Year of the game's release
5. Genre - Genre of the game
6. Publisher - Publisher of the game
7. NA\_Sales - Sales in North America (in millions)
8. EU\_Sales - Sales in Europe (in millions)
9. JP\_Sales - Sales in Japan (in millions)

10. Other\_Sales - Sales in the rest of the world (in millions)

11. Global\_Sales - Total worldwide sales.

## Activity 2: Storing Data in DB & Perform SQL Operations



## Activity 3: Connect DB with Tableau

Tableau - Book1 - Tableau license expires in 8 days

File Data Server Window Help

Connections [Add](#)

vg-sales  
Text file

Files

☐ Use Data Interpreter  
Data Interpreter might be able to clean your Text file workbook.

- banks\_data.csv
- dim\_date.csv
- dim\_hotels.csv
- dim\_rooms.csv
- fact\_aggregated\_booking.csv
- fact\_booking.csv
- vg-sales.csv

[New Union](#)

[New Table Extension](#)

vg-sales.csv

Connection ☒ Live ☐ Extract

Filters 0 | [Add](#)

Need more data?  
Drag tables here to relate them. [Learn more](#)

vg-sales.csv 11 fields 16598 rows 100 rows

#	Abc	Abc	#	Abc	Abc
Rank	Name	Platform	Year	Genre	Publisher
1	Wii Sports	Wii	2006	Sports	Nintendo
2	Super Mario Bros.	NES	1985	Platform	Nintendo
3	Mario Kart Wii	Wii	2008	Racing	Nintendo
4	Wii Sports Resort	Wii	2009	Sports	Nintendo
5	Pokemon Red/Pokemon Blue	GB	1996	Role-Playing	Nintendo
6	Tetris	GB	1989	Puzzle	Nintendo

Data Source Sheet 1

## Milestone 3: Data Preparation

### Activity 1: Prepare the Data for Visualization

Preparing the data for visualization involves cleaning the data to remove irrelevant or missing data, transforming the data into a format that can be easily visualized, exploring the data to identify patterns and trends, filtering the data to focus on specific subsets of data, preparing the data for visualization software, and ensuring the data is accurate and complete. This process helps to make the data easily understandable and ready for creating visualizations to gain insights into the performance and efficiency.

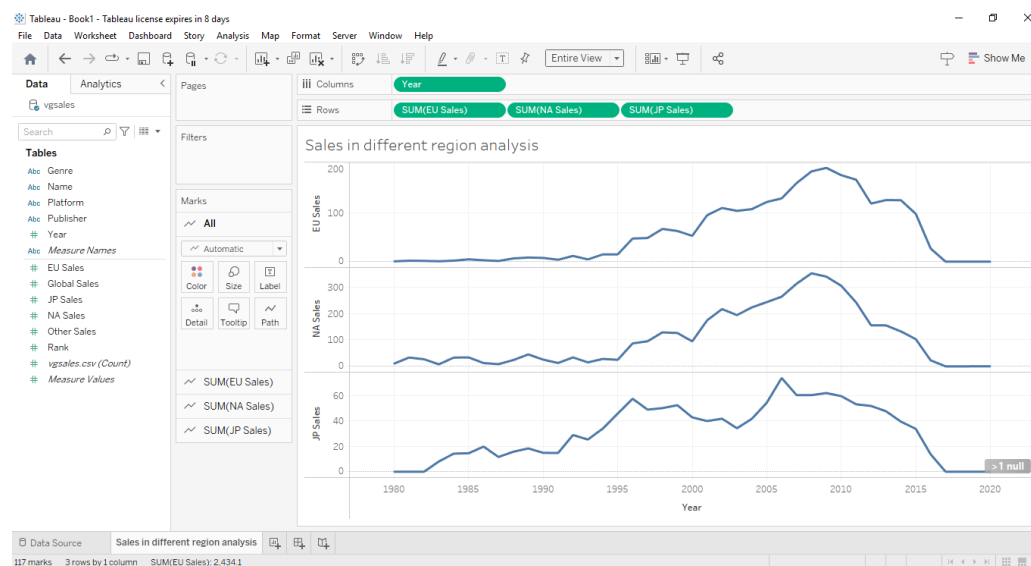
## Milestone 4: Data Visualization

Data visualization is the process of creating graphical representations of data in order to help people understand and explore the information. The goal of data visualization is to make complex data sets more accessible, intuitive, and easier to interpret. By using visual elements such as charts, graphs, and maps, data visualizations can help people quickly identify patterns, trends, and outliers in the data.

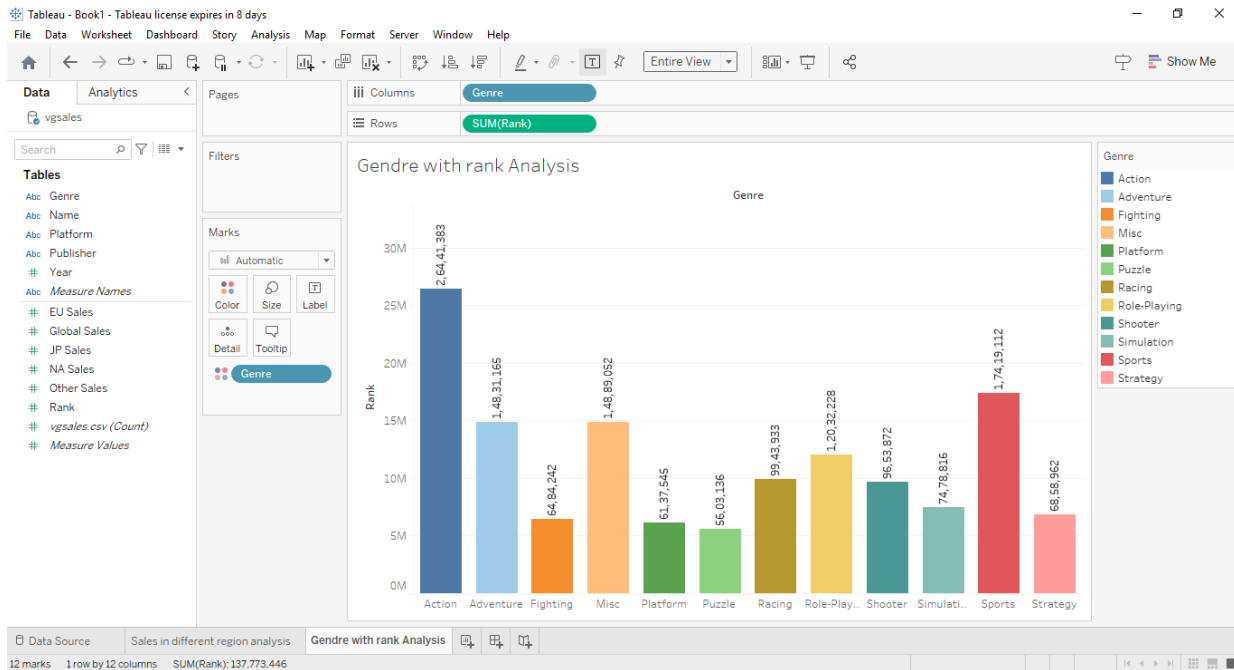
## Activity 1: No of Unique Visualizations

The number of unique visualizations that can be created with a given dataset. Some common types of visualizations that can be used to analyze the performance and efficiency of Radisson Hotels include bar charts, line charts, heat maps, scatter plots, pie charts, Maps etc. These visualizations can be used to compare performance, track changes over time, show distribution, and relationships between variables, breakdown of revenue and customer demographics, workload, resource allocation and location of sales of Games.

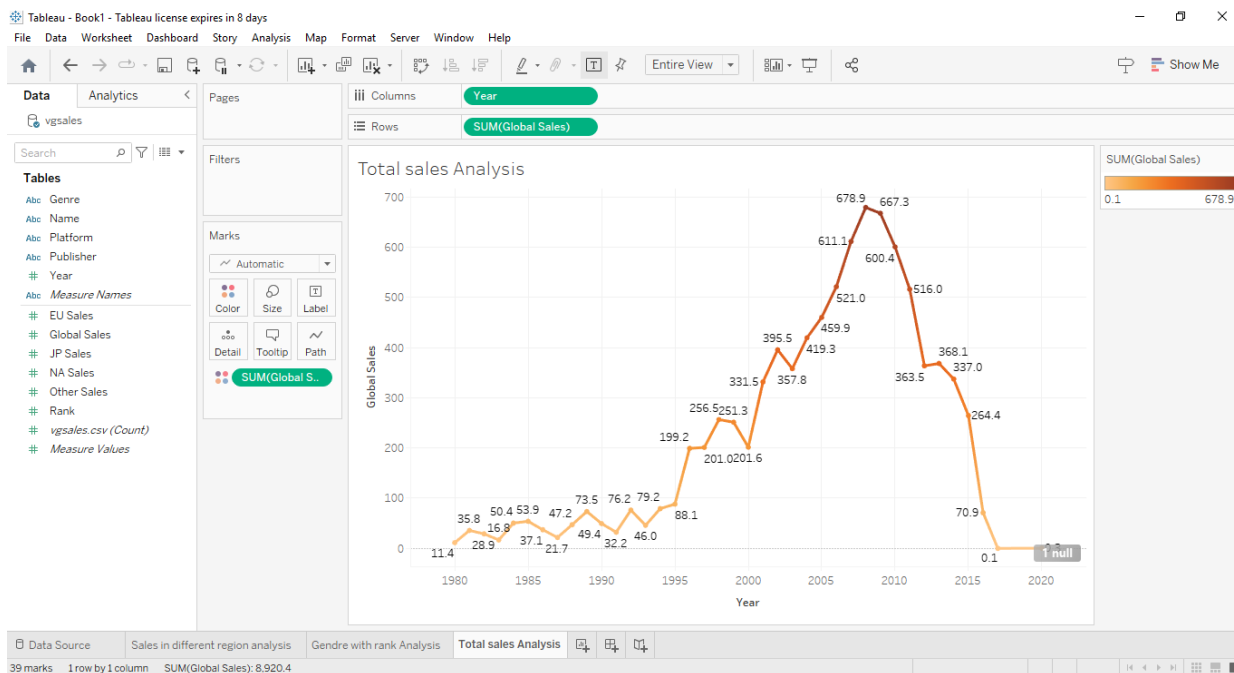
### Activity 1.1: Sales in different region Analysis



### Activity 1.2: Genre with rank Analysis



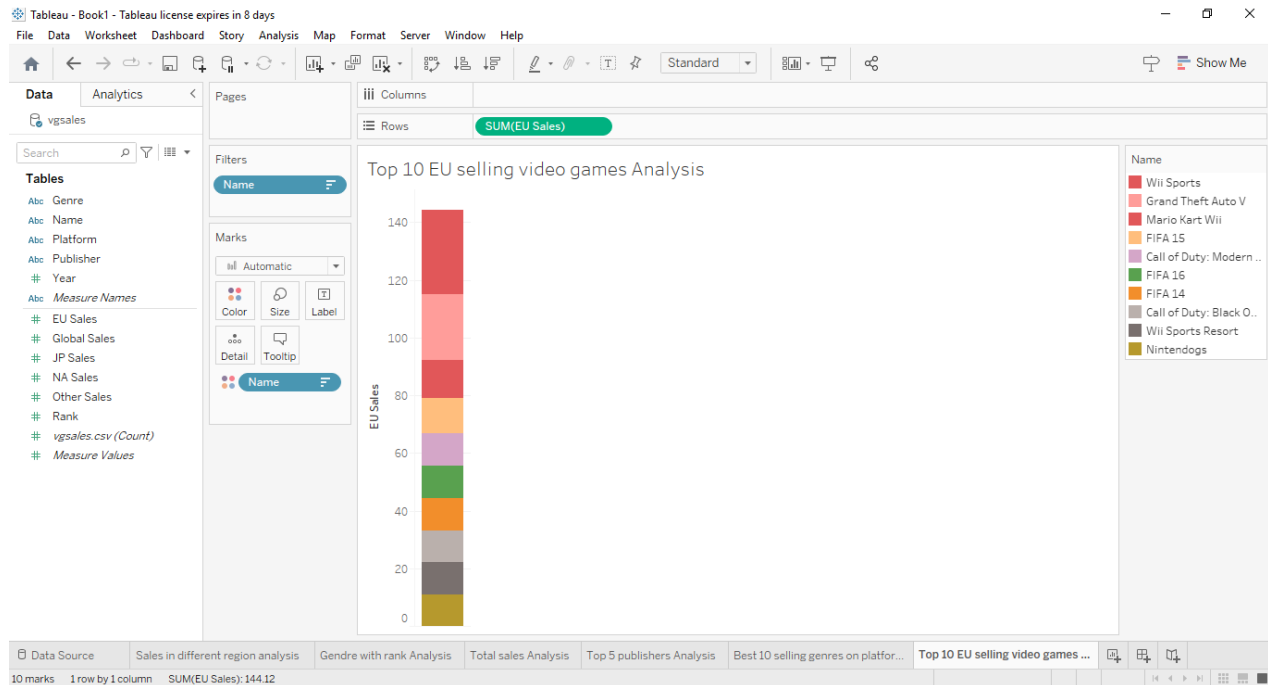
## Activity 1.3: Total Sales Analysis



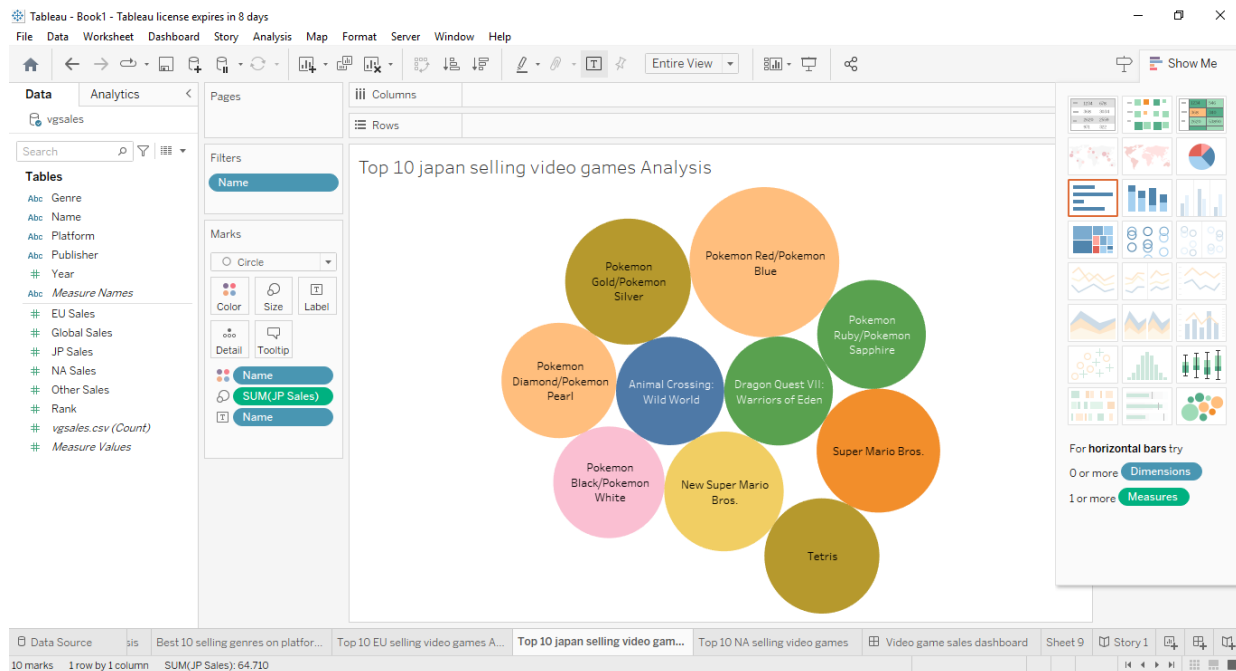
## Activity 1.4: Top 5 publishers Analysis



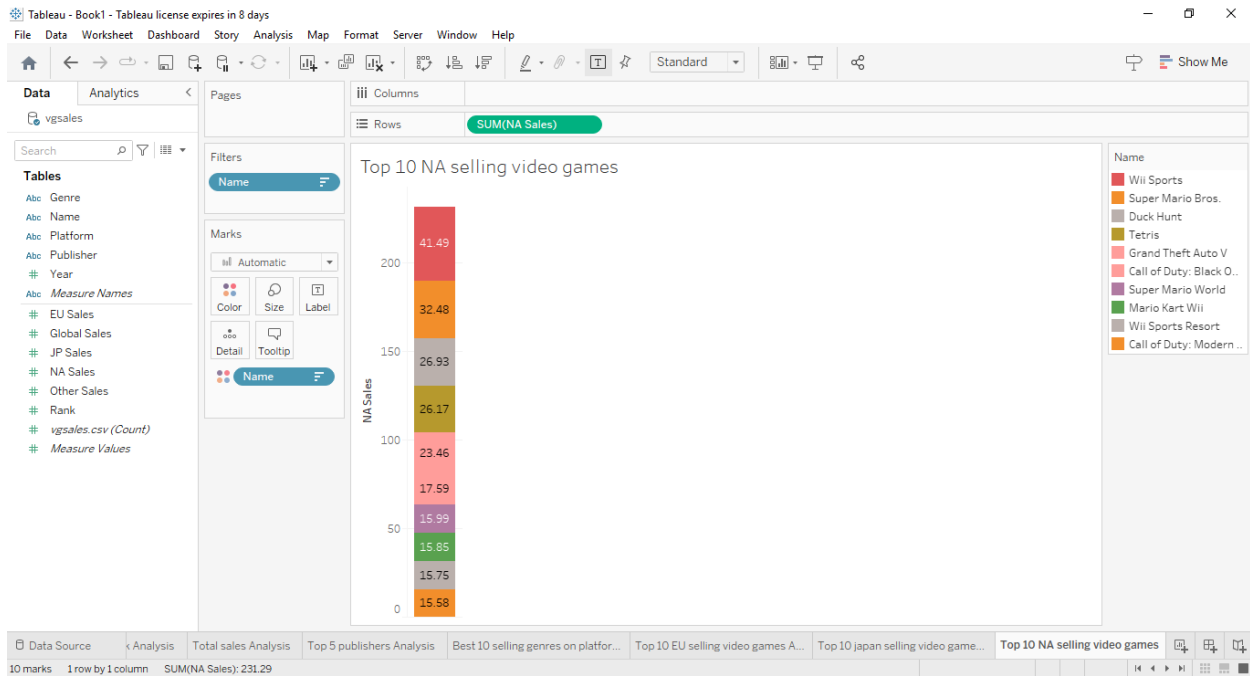




## Activity 1.7 Top 10 Japan selling video games Analysis



## Activity 1.8: Top 10 NA selling video games



## Milestone 5: Dashboard

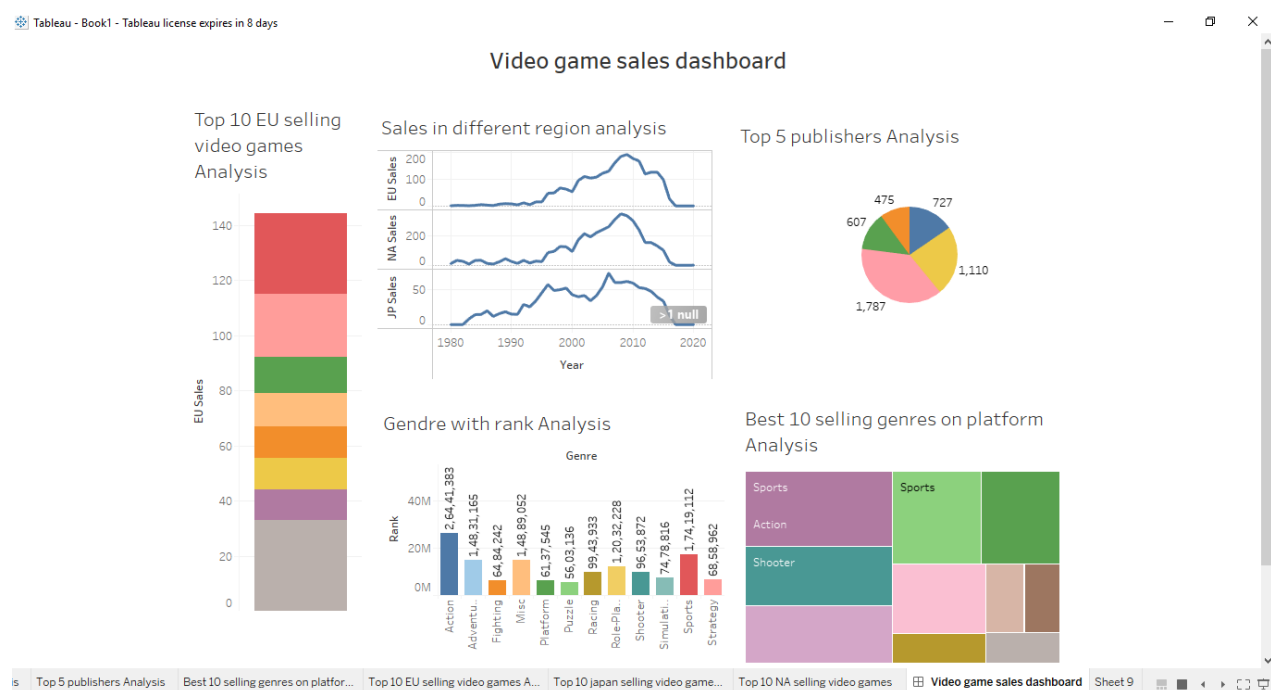
A dashboard is a graphical user interface (GUI) that displays information and data in an organized, easy-to-read format. Dashboards are often used to provide real-time monitoring and analysis of data, and are typically designed for a specific purpose or use case. Dashboards can be used in a variety of settings, such as business, finance, manufacturing, healthcare, and many other industries. They can be used to track key performance indicators (KPIs), monitor performance metrics, and display data in the form of charts, graphs, and tables.

### Activity :1- Responsive and Design of Dashboard

The responsiveness and design of a dashboard for analyzing the performance and efficiency of Radisson Hotels is crucial to ensure that the information is easily understandable and actionable. Key considerations for designing a responsive and effective dashboard include user-centered design, clear and concise information,

interactivity, data-driven approach, accessibility, customization, and security. The goal is to create a dashboard that is user-friendly, interactive, and data-driven, providing actionable insights to improve the performance and efficiency of Radisson Hotels.

Once you have created views on different sheets in Tableau, you can pull them into a dashboard.



## Milestone 6: Story

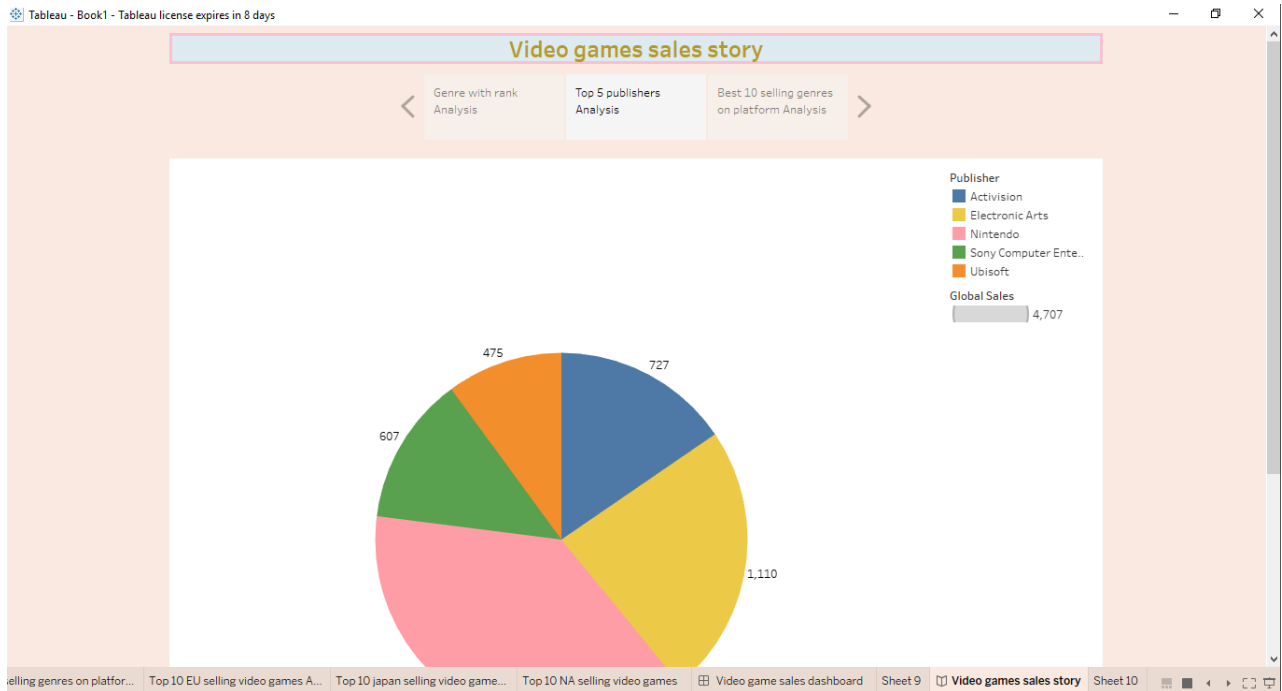
A data story is a way of presenting data and analysis in a narrative format, with the goal of making the information more engaging and easier to understand. A data story typically includes a clear introduction that sets the stage and explains the context for the data, a body that presents the data and analysis in a logical and systematic way, and a conclusion that summarizes the key findings and highlights

their implications. Data stories can be told using a variety of mediums, such as reports, presentations, interactive visualizations, and videos.

## Activity:1- No of Scenes of Story

The number of scenes in a storyboard for a data visualization analysis of the performance and efficiency of video games analysis will depend on the complexity of the analysis and the specific insights that are trying to be conveyed. A storyboard is a visual representation of the data analysis process and it breaks down the analysis into a series of steps or scenes.



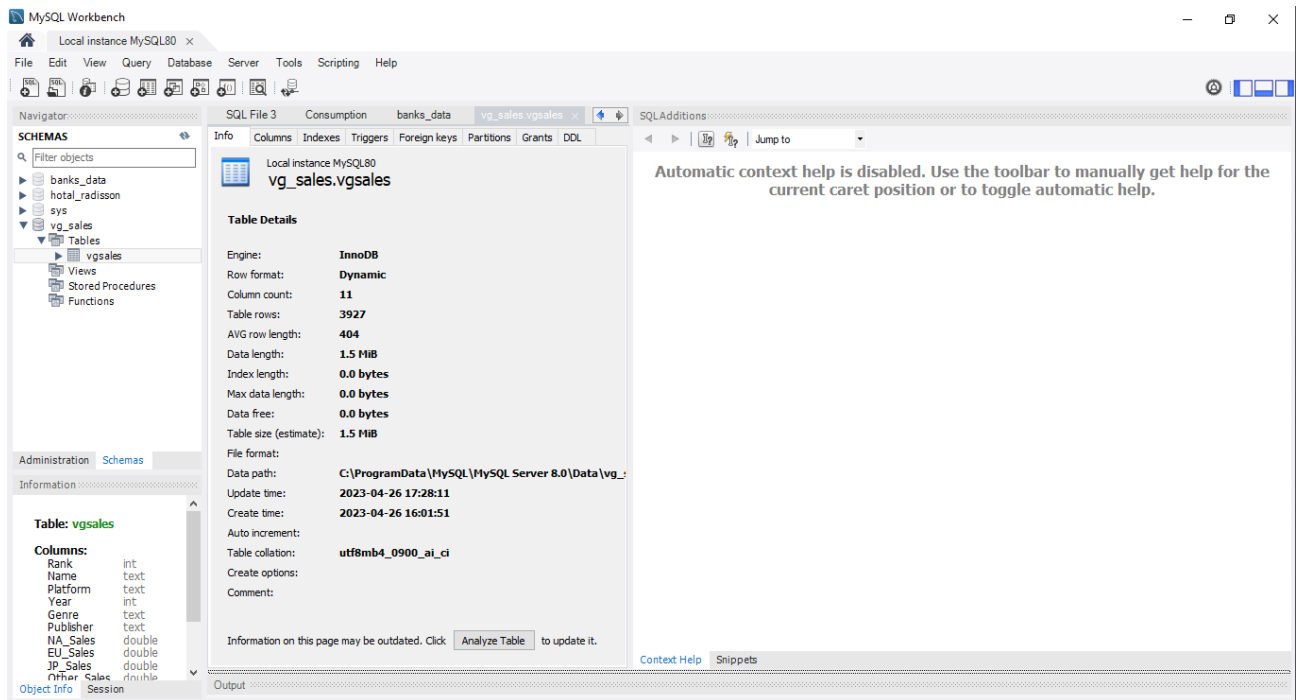




## Milestone 7: Performance Testing

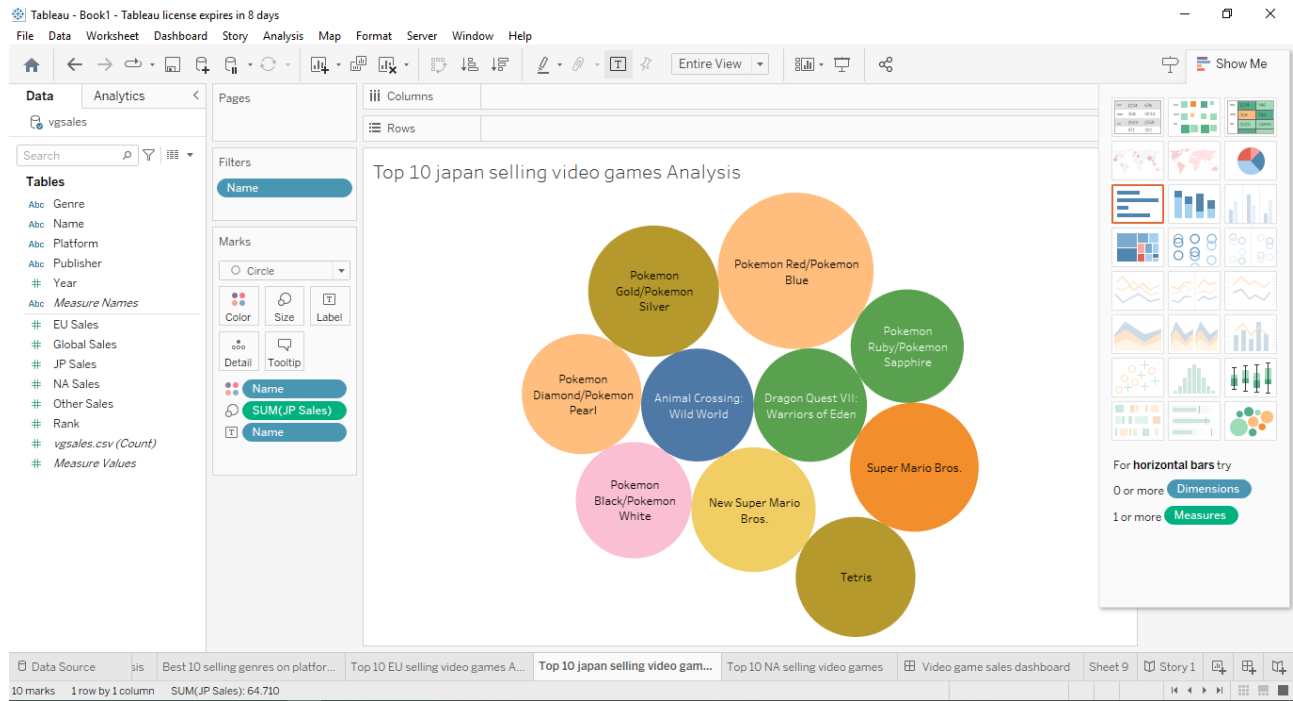
## Activity 1: Amount of Data Rendered to DB

- The amount of data that is rendered to a database depends on the size of the dataset and the capacity of the database to store and retrieve data.
- Open the MySQL Workbench, go to the database then click to expand the tables, select the table and click on (i) button to get the information related to table such as column count, table rows etc.



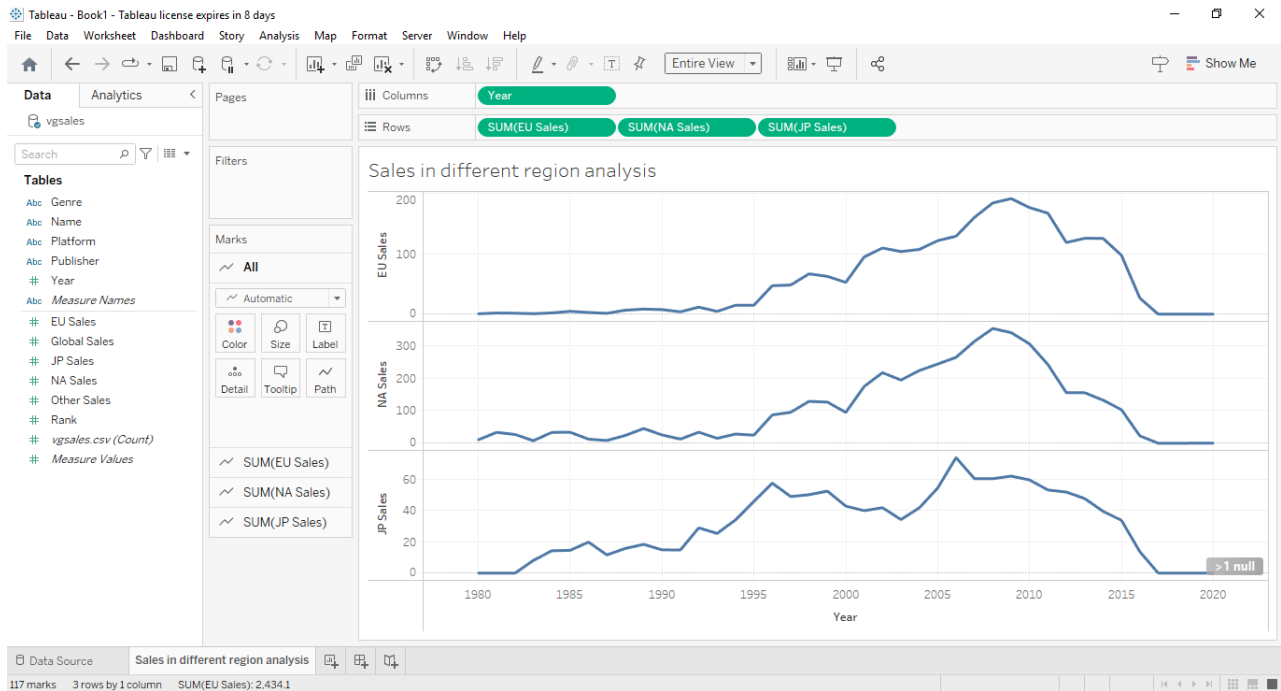
## Activity 2: Utilization of Data Filters



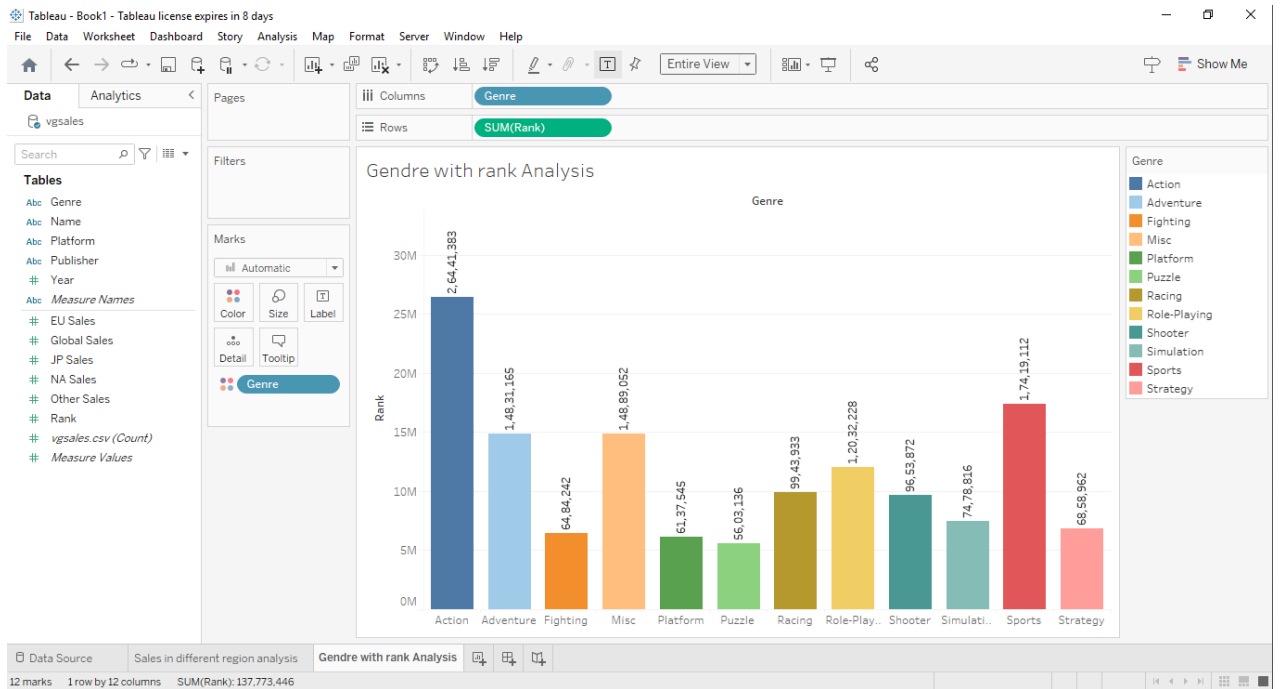


## Activity 3: No of Visualizations/ Graphs

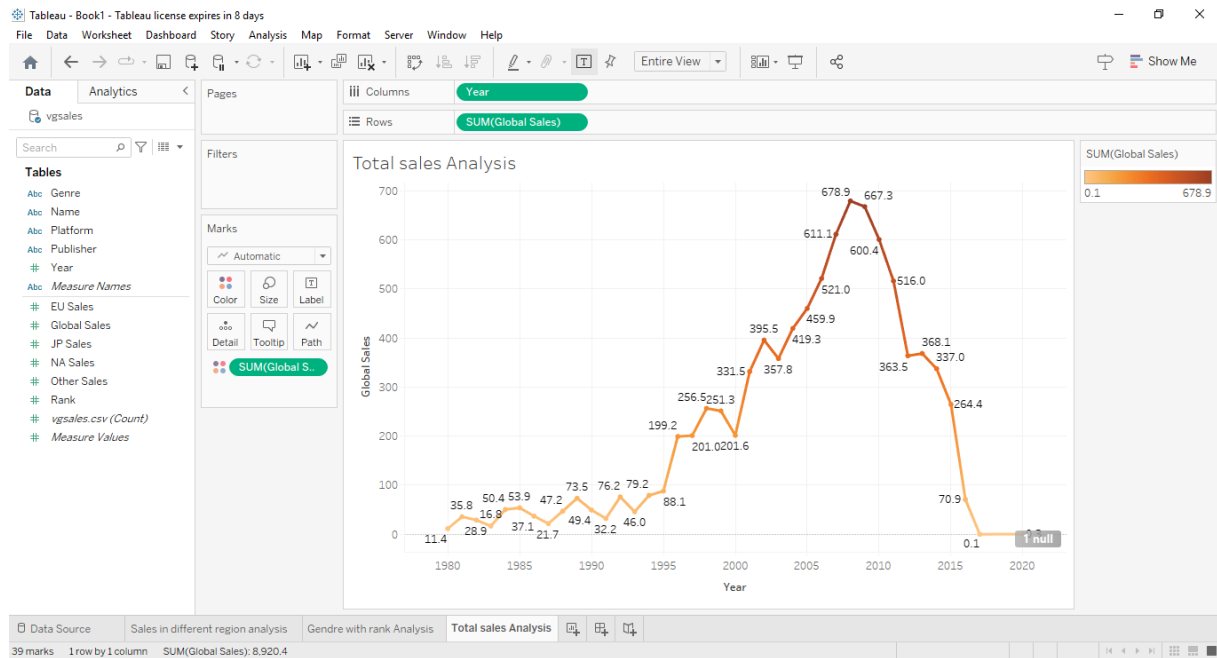
### 1. Sales in different region Analysis



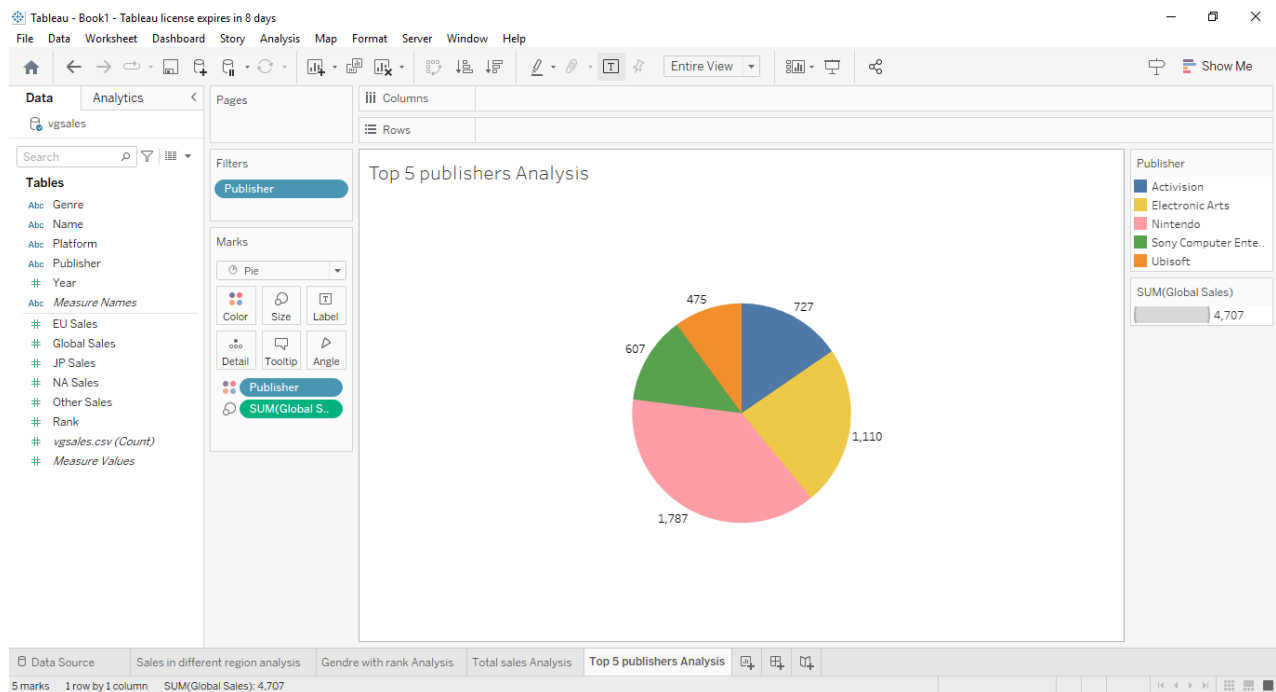
## 2. Genre with rank Analysis



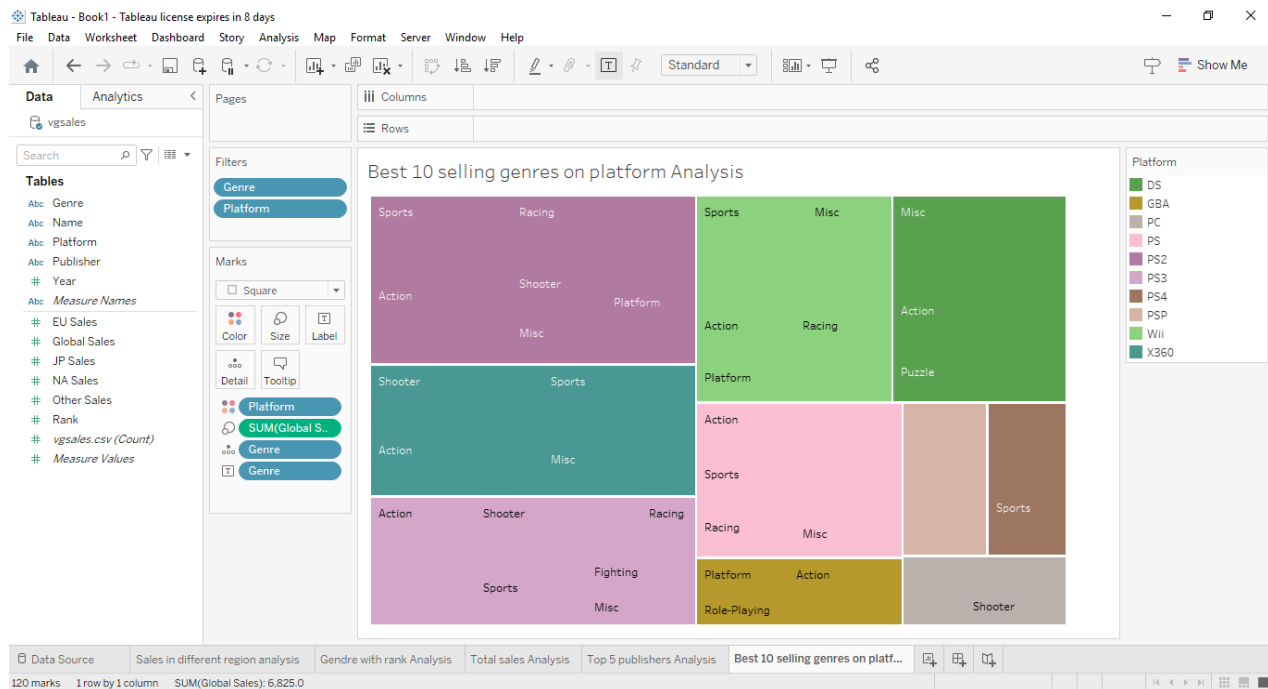
## 3. Total Sales Analysis



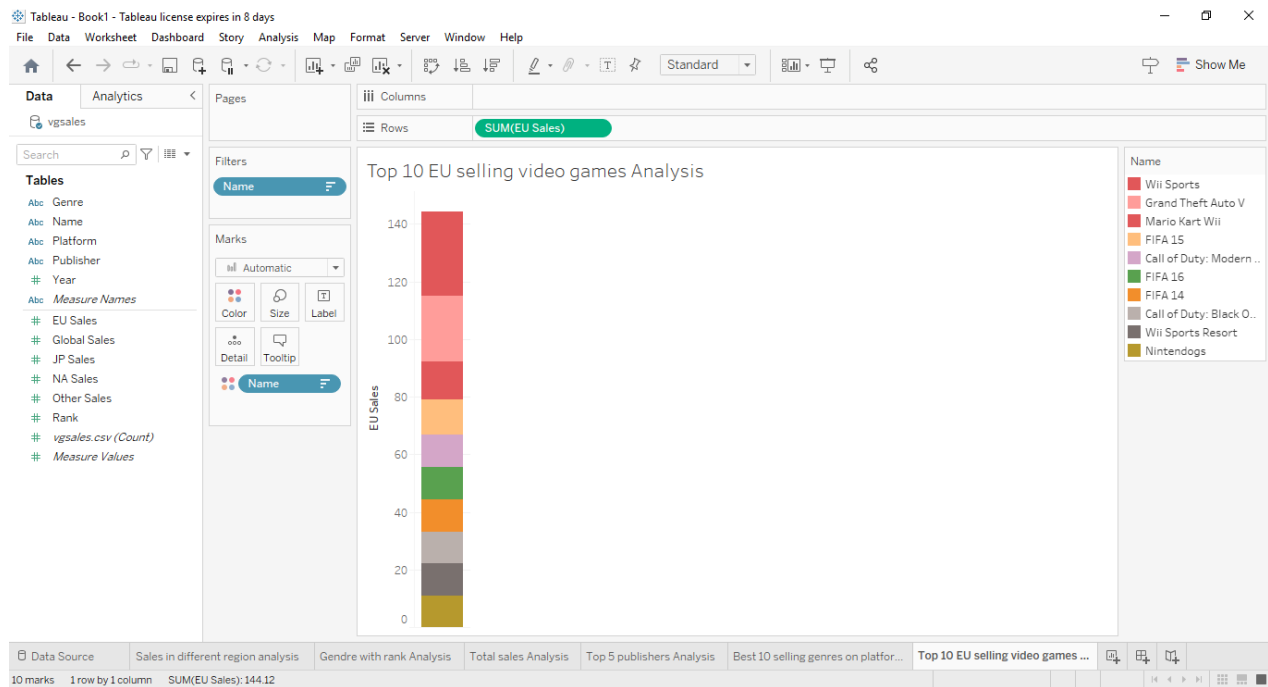
## 4. Top 5 publishers Analysis



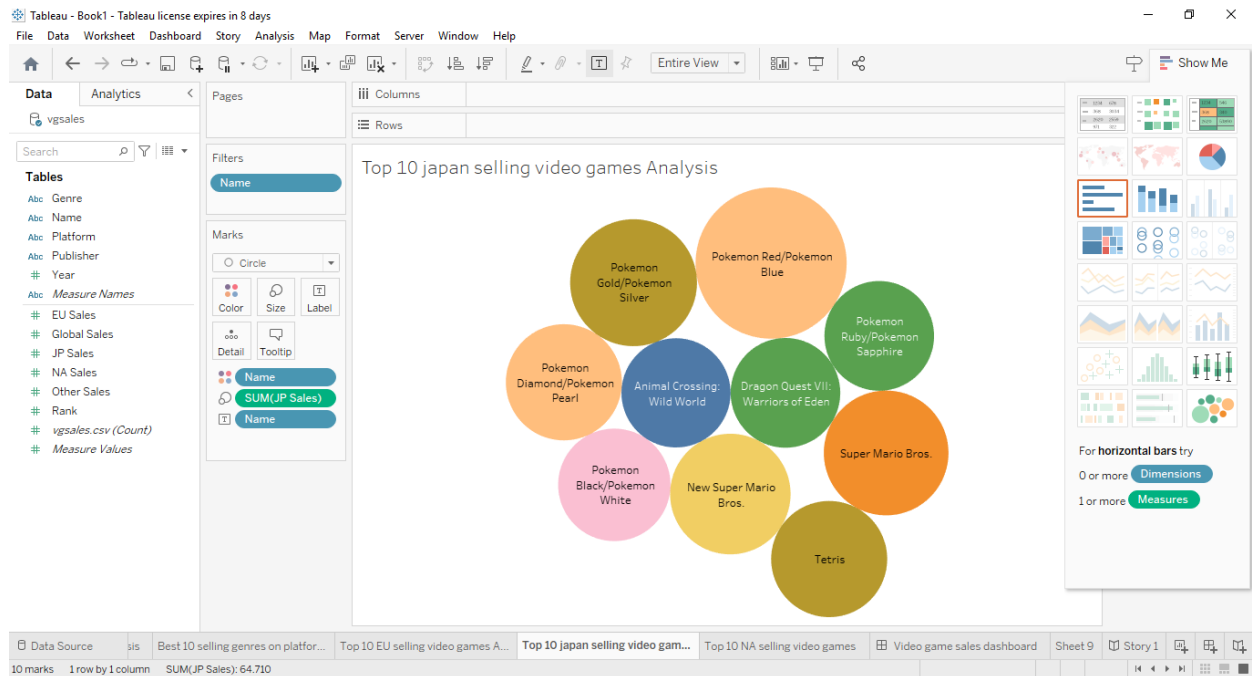
## 5. Best 10 selling genres on platform Analysis



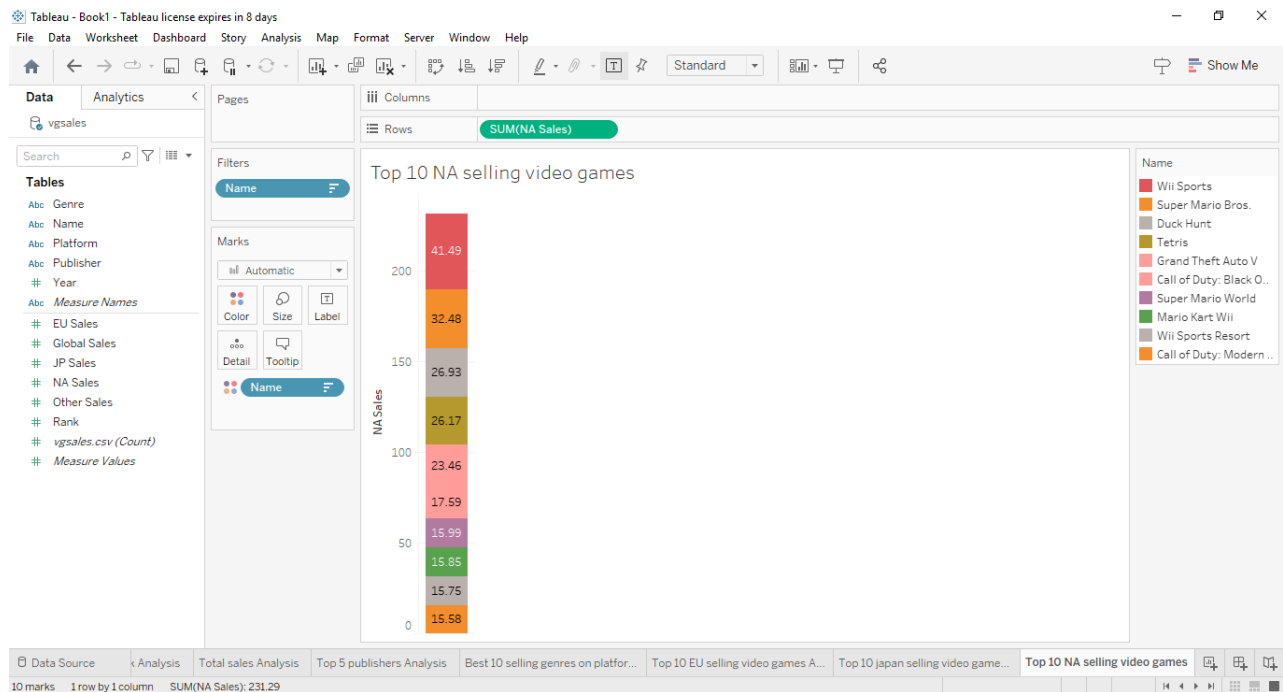
## 6. Top 10 EU selling video games Analysis



## 7. Top 10 Japan selling video games Analysis



## 8. Top 10 NA selling video games

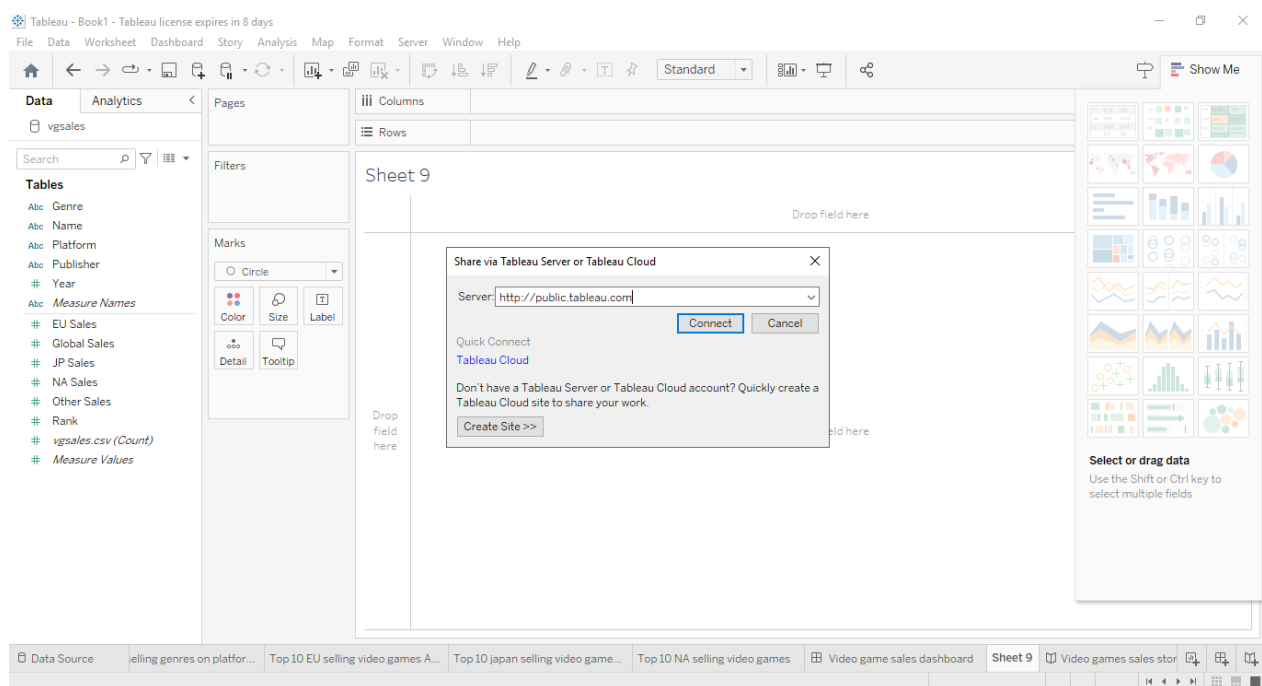


## Milestone 8: Web integration

Publishing helps us to track and monitor key performance metrics, to communicate results and progress. help a publisher stay informed, make better decisions, and communicate their performance to others.

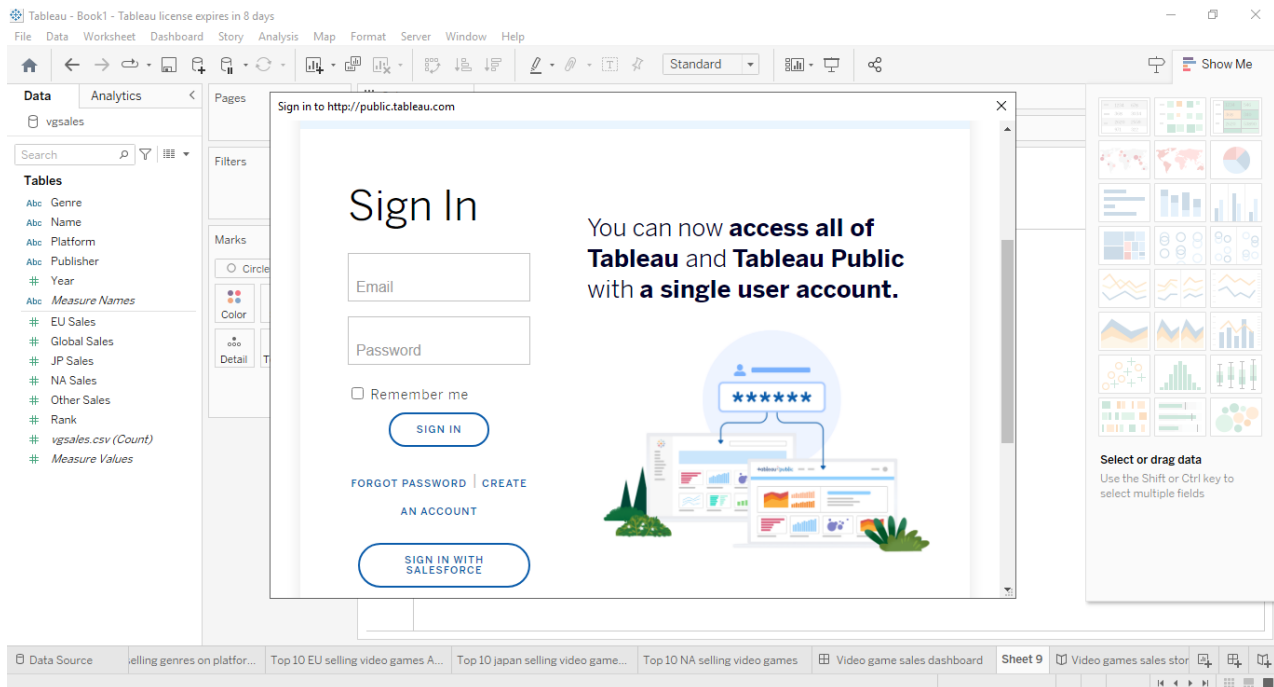
### Publishing dashboard and reports to tableau public

Step 1: Go to Dashboard/story, click on share button on the top ribbon



Give the server address of your tableau public account and click on connect.

**Step 2:** Once you click on connect it will ask you for tableau public user name and password



Once you login into your tableau public using the credentials, the particular visualization will be published into tableau public

Note: While publishing the visualization to the public, the respective sheet will getpublished when you click on share option.

## Activity 1: Dashboard and Story embed with UI With Flask

## A Tableau Presentation

[Get Started](#)

Video Games since its inception has touched many souls by their augmented reality and graphics, apart from being a good to boredom it also shows us the way technology has been developed from single Nintendo to PS5, from road rash to God of war.

This project is a complete analysis of video games sold since 1980. It consists of video games with their publisher and platform with the genre of games on which year they were published with the sales they made in North America, Japan, Europe and other regions.



## CHALLENGES

Analysing sales data from more than 18,500 games. This dataset contains a list of video games with sales greater than 100,000 copies. It was generated by a scrape of [vgchartz.com](#).  
Let us check some top sale video games

## Super Mario Bros

Super Mario Bros is a platform game developed and published by Nintendo for the Nintendo Entertainment System (NES).

## Wii Sports

Wii Sports is a 2006 sports simulation video game developed and published by Nintendo for the Wii video game console.

## Pokémon Red/Pokémon Blue

Pokémon Red version and Pokémon Blue version are 1996 role-playing video games developed by Game Freak and published by Nintendo for the Game Boy.

## Grand Theft Auto IV

Grand Theft Auto IV is a 2008 action-adventure game developed by Rockstar North and published by Rockstar Games. It is the fourth main entry in the Grand Theft Auto series, following 2001's Grand Theft Auto: San Andreas.

## Minecraft

Minecraft is a sandbox game developed by Mojang Studios. The game was created by Markus "Notch" Persson in the Java programming language. It is the best-selling video game of all time, with over 220 million copies sold and earning \$4.4 billion (as of August 2019), and has been ported to several platforms.

## FIFA 16

FIFA 16 is a football simulation video game developed by EA Canada and published by Electronic Arts under the EA Sports label.

## ANALYSIS CHARTS

This data consists of 18599 records with 11 columns. The visualization is done using Tableau and contains 9 analysis charts.

127.0.0.1:5500/index.html#services

1

## ANALYSIS CHARTS

This data consists of 18599 records with 11 columns. The visualization is done using Tableau and contains 9 analysis charts.

ALL SALES GAMES PUBLISHERS

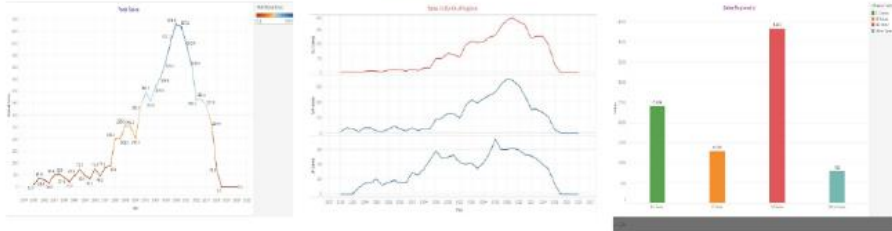


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## ANALYSIS CHARTS

This data consists of 16599 records with 11 columns. The visualization is done using Tableau and contains 9 analysis charts.

ALL SALES GENRE PUBLISHERS



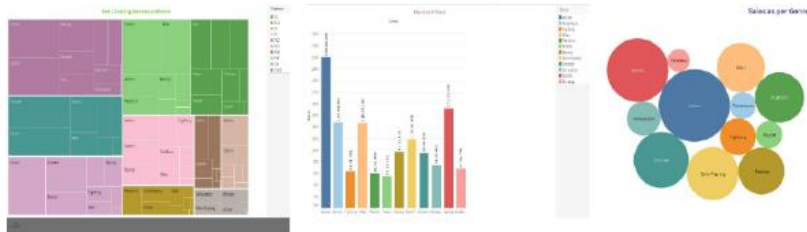
## DASHBOARD



## ANALYSIS CHARTS

This data consists of 16599 records with 11 columns. The visualization is done using Tableau and contains 9 analysis charts.

ALL SALES GENRE PUBLISHERS



## DASHBOARD



## ANALYSIS CHARTS

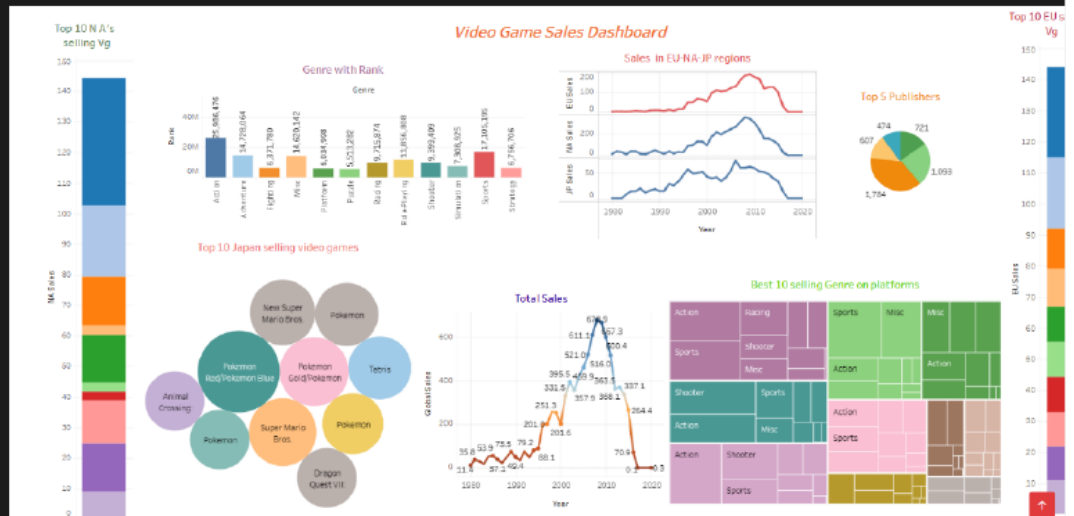
This data consists of 16599 records with 11 columns. The visualization is done using Tableau and contains 9 analysis charts.



## DASHBOARD

## DASHBOARD

There you go! This dashboard contains 9 main analysis charts.



STORY

Stories of 5 charts

Video Games Sales Story

ally by	<b>SALES PER GENRE</b> - This bubble chart shows us the sales count in each genre of games, Action being the top performer followed by sports and shooting games. Gamers are not very fond of strategy games, that is what we can infer from the bubble.	<b>SALES REGIONALLY</b> - These bar represent the number of units sold in different regions like North America, Japan, Europe and other parts of the world. The most popular video games (units are from Japan) America as the units sold here are the highest and other parts of the world are yet to get the buzz for the video games.	<b>TOTAL SALES</b> - The line graph here shows the year 2008 to 2018 (average line here and the value of blue as the highest sales and red a
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CONCLUSION

- Conclusion 1 ~ x
- Conclusion 2 ~ x
- Conclusion 3 ~ x

Well, there are lots of efforts going into creating a single game and due to modern era mobile games other platforms are getting deprived of the attention which had created a lot of awesome experiences for gamers from 1980-2010.